Economics Information

REPT NO. 87-01

Ontario

ISSN 0708-482X

A SURVEY OF CUSTOM FARMWORK RATES CHARGED IN ONTARIO, 1986

ECONOMICS AND POLICY
COORDINATION BRANCH

ONTARIO MINISTRY OF AGRICULTURE AND FOOD
LEGISLATIVE BUILDINGS, TORONTO, ONTARIO, M7A 1B6

87-04685/

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ECONOMICS INFORMATION

REPORT NO. 87-01

A SURVEY OF CUSTOM FARMWORK RATES CHARGED IN ONTARIO, 1986

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January 1987

ISSN-0713-0449

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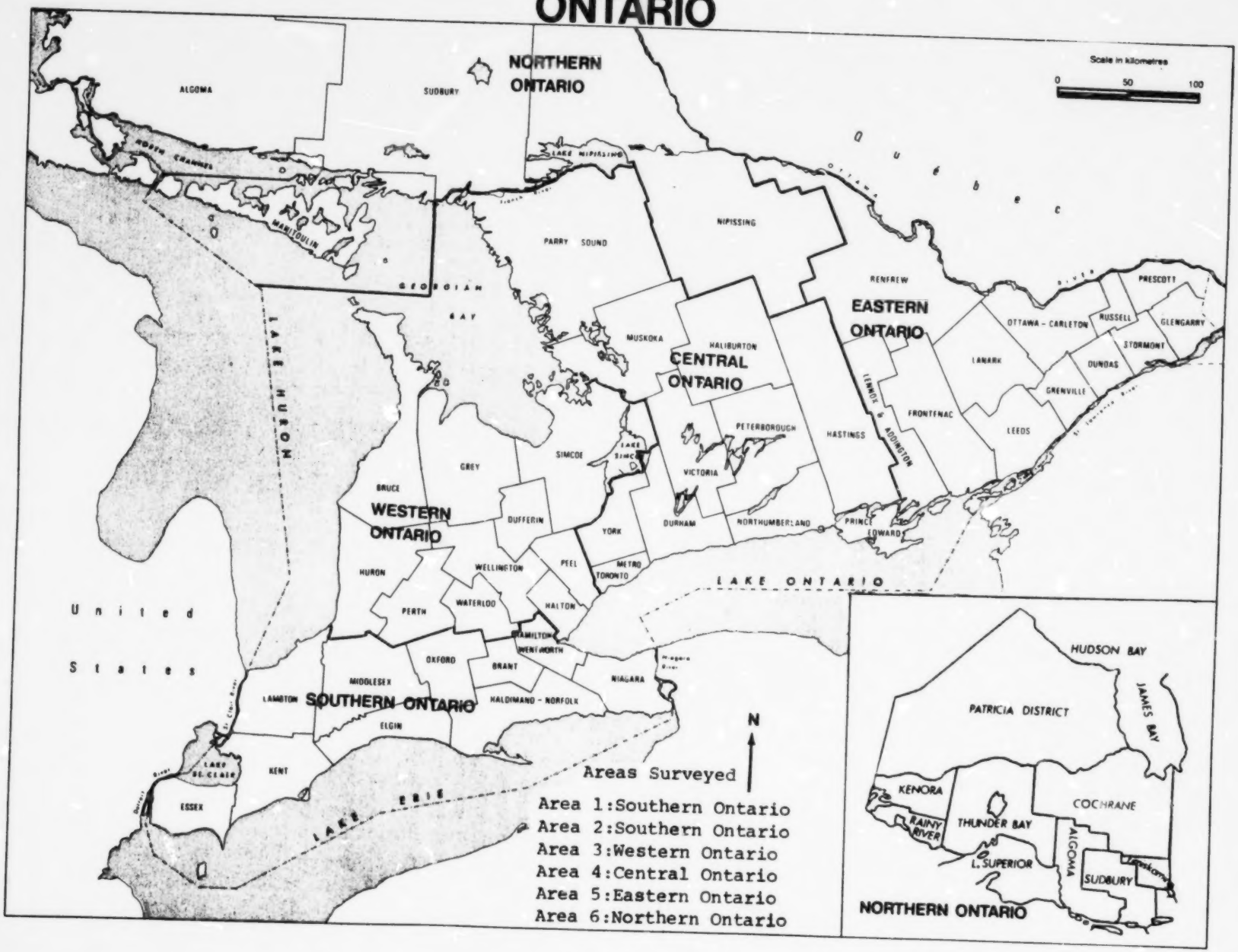
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NORTHERN ONTARIO
EASTERN ONTARIO
CENTRAL ONTARIO
WESTERN ONTARIO
SOUTHERN ONTARIO
Scale in kilometres
0 50 100
ALGOMA
SUDBURY
NIPISSING
PARRY SOUND
MANITOULIN
GEORGIAN BAY
LAKE HURON
MUSKOKA
HALIBURTON
RENFREW
PRESCOTT
OTTAWA - CARLETON
RUSSELL
GLENGARRY
STORMONT
DUNDAS
LANARK
GRENVILLE
FRONTENAC
LEEDS
LENNOX & ADDINGTON
HASTINGS
PETERBOROUGH
VICTORIA
SIMCOE
GREY
BRUCE
DUFFERIN
YORK
DURHAM
NORTHUMBERLAND
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HALTON
WELLINGTON
WATERLOO
PERTH
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HALDIMAND - NORFOLK
MIDDLESEX
LAMBTON
ELGIN
KENT
ESSEX
LAKE ST. CLAIR
LAKE ERIE
LAKE ONTARIO
United States
N
Areas Surveyed
Area 1:Southern Ontario
Area 2:Southern Ontario
Area 3:Western Ontario
Area 4:Central Ontario
Area 5:Eastern Ontario
Area 6:Northern Ontario
HUDSON BAY
JAMES BAY
PATRICIA DISTRICT
KENORA
RAINY RIVER
THUNDER BAY
COCHRANE
L. SUPERIOR
ALGOMA
SUDBURY
NORTHERN ONTARIO

FOREWORD

In November 1986, the Economics and Policy Coordination Branch of the Ontario Ministry of Agriculture and Food (OMAF) conducted a survey of custom farmwork rates charged during 1986 for six areas of Ontario. Over 1,000 mail-back survey forms were sent to custom operators, with over 600 being returned. Each custom operator was asked to volunteer information on custom services provided, schedule of rates charged for 1986, and equipment and labor provided. All information was treated confidentially. This report updates the 1985 survey of custom farm rates charged in Ontario.

The results of the 1986 survey are presented in Tables 1 through 12. For each of the survey areas, the ranges of rates, the most frequently quoted rates, and the average rates are given for the most common operations performed. The information in this report may be used as a guide by custom operators and by farmers using custom services, **BUT IT SHOULD NOT BE INTERPRETED AS RECOMMENDATIONS.**

The custom work survey rates are reported by areas as follows.

Area 1 - Southern Ontario: Essex, Kent, Lambton, Middlesex, and Elgin Counties.

Area 2 - Southern Ontario: Oxford and Brant counties; and regional municipalities of Haldimand-Norfolk, Niagara, and Hamilton-Wentworth.

Area 3 - Western Ontario: Huron, Perth, Bruce, Grey, Wellington, Dufferin, and Simcoe counties; and regional municipalities of Waterloo, Peel, and Halton.

Area 4 - Central Ontario: Victoria, Northumberland, Peterborough, Hastings, and Prince Edward counties; and regional municipalities of York and Durham.

Area 5 - Eastern Ontario: Lennox and Addington, Frontenac, Leeds, Lanark, Renfrew, Grenville, Dundas, Stormont, Russell, Prescott, and Glengarry counties; and the regional municipality of Ottawa-Carleton.

Area 6 - Northern Ontario: Algoma, Cochrane North and South, Kenora, Manitoulin, Nipissing, Rainy River, and Timiskaming.

OBSERVATIONS AND COMMENTS ON CUSTOM FARMWORK SERVICES

If today's farmers are to meet the challenge of changing cost-price relationships, they need good management as well as efficient farming operations. The services offered by custom work operators play an important part in Ontario's farming activities. With the trend toward increased mechanization, many farmers have overinvested in specialized machinery in an attempt to reduce labor requirements and increase farm efficiency. By using custom work services, farmers can obtain the benefit of these specialized machines without having to buy them. Many cannot economically afford to own and operate such equipment for the amount of work on their farms. Custom work services also allow farmers to use their labor for other purposes.

Custom rates should cover all costs, such as interest on investment, depreciation, repairs, maintenance, housing, insurance, grease, oil, and fuel (where applicable), and labor; and leave a profit for the operator. The supply and demand for custom work services in any area will be reflected in the custom rates charged. Low rates may reflect the willingness of some farmers or machinery owners to do additional work to help offset the ownership costs of the machinery. They may also reflect good operating conditions such as large, level, obstruction-free fields and weed-free crops, which allow custom operators to work at normal or above normal speeds. High custom rates can indicate a shortage of operators willing to do custom work. They can also indicate poor weather conditions, awkward field shapes or sizes, and hard or stony soil conditions, which cause above normal breakages and increased costs to custom operators.

The data in this report show that custom rates vary -- in some cases quite widely. Some custom operators expressed concern over the increasing costs of machinery, machinery repairs and fuel. Others were concerned about the problems of adjusting their rates to meet increased costs at a time of changing farm prices. Custom operators who know the operating costs for their machines and the conditions they must work under can compare their own rates with the survey rate averages for their areas.

Most custom operators in Ontario perform their services without any type of written agreement. In some cases, disputes have occurred about custom farmwork services provided. Custom hiring is a business arrangement and the terms of the arrangement should be written into a formal agreement.

Some of the items to be considered in a formal contract are:

1. Operation(s) to be performed;
2. Timeliness of the operation;
3. Rate schedule to be used;
4. Managerial practices to be followed; and
5. Payment considerations.

Other considerations that could be included are: the responsibility in case of machine breakdown; the role of the farmer in assisting the custom operator; and arrangements to be made on notice of contract cancellation.

Farmers who are thinking about buying new machines can get an idea of the rates being charged in their area for the various services custom operators perform. In addition to rates charged, farmers should consider other factors in hiring custom work, such as the availability of custom operators in their area to do the required operation and the timeliness needed in doing the work.

CUSTOM TILLAGE AND PLANTING

Depending on the area, and the number of replies received, custom charges for plowing, discing, and planting were reported on a per-acre and/or per-hour basis. In all areas, plowing rates varied with the conditions under which custom operators worked. These conditions included extra heavy soils, size of field, obstruction, time of plowing (such as spring or fall) and the kinds of crop residues handled such as cornstalks and long-term alfalfa or other sod fields. In some areas, custom operators charged an hourly rate for some tillage operations.

Some custom operators made a distinction in the discing rate charged depending on field obstructions, soil texture, shape of field, and whether harrows or a cultipacker were trailed behind the discs. Extra charges were usually made when added equipment was pulled behind a tandem disc or field cultivator.

If preemergent sprays or fertilizers, or both were applied at planting time, custom operators usually charged more for applying the materials. Rates charged for custom planting varied widely in some areas because operators included these additional charges. In most cases, farmers delivered the materials -- seed, fertilizers, sprays, water -- to the field.

Custom operators who charged by the hour for planting corn, beans, and small grains felt this method was fair to both the farmers and themselves. Farmers can speed up the planting operation if they help handle the fertilizer and seed. By using an hourly basis, custom operators can more easily calculate planting charges when fields are irregular and exact acreages unknown.

CUSTOM WEED CONTROL AND FERTILIZER APPLICATIONS

Some custom operators brought their own water supply tanks while others insisted that water be readily available. In some areas, rates were reported for the application and immediate incorporation of pre-emergent sprays into the soil. The ready supply of water may have had a bearing on the rates charged.

In almost all cases, farmers supplied the materials for the weed spraying operations. To avoid misunderstanding, the rate and the material used should be clearly agreed upon by the farmer and the custom operator prior to the commencement of each spraying job.

In some areas, rates were provided for applying anhydrous fertilizers but not for other nitrogen fertilizers. Rates varied between and within areas depending on who supplied the applicator and delivered the anhydrous supply tanks to the farm.

CUSTOM HARVESTING BEANS, SMALL GRAINS, AND CORN

Rates for combining varied because of crop lodging, weed growth, muddy fields, and other poor operating conditions. Some custom operators who normally charged by the acre charged by the hour if they were hired to open fields or if muddy or other abnormal conditions prevailed.

Combining rates varied widely in some areas because some custom operator supplied additional equipment such as wagons, elevators, and augers. Custom corn picking rates were not obtained in all survey areas. These rates also varied depending on the equipment supplied.

Custom operators in some areas quoted hourly rates for combining. Because of the difference in combine sizes, the range in rates obtained was quite wide. Understandably, four-row and six-row combines harvest more acres per hour than two two-row combines. See Appendix Table 1 for some guidance as to the rates in acres per hour for different combine sizes. No rates were reported for those custom operations where an insufficient number of replies was received.

Trucking rates for grains varied depending on the distance from the farm to the elevator, the facilities for loading and unloading, and the time of year. Truckers sometimes charged less per bushel for handling grain when there were convenient farm loading facilities and during nonharvest or less busy periods. On the other hand, when loading facilities were poor and during the harvest rush, some truckers charged their standard rates while others charged more to compensate for slow loading and delivery.

Rates for drying operations varied among custom operators supplying this service because of the different drying systems and methods of charging. Therefore, custom drying charges were not reported because of the different ways of charging for this service.

The majority of custom farm drying operations are now using the drying charges as established by the Ontario Grain and Feed Dealers Association. These tables are in metric measure and show the number of kilograms of wet corn and soybeans required to yield the number of dry tonnes. Copies of these tables are shown in the Appendix of this report. The elevator charges per tonne for drying corn using natural gas at different moisture levels are provided in the tables. The table for drying corn using propane at different moisture levels is not available. The drying charges can be used as a guide in establishing custom rates for farm drying operations. These elevator drying charges do not include costs for handling grains, however, so an added cost per bushel may be made to cover handling charges.

CUSTOM SILO FILLING

Rates for silo filling of corn were most commonly figured on an hourly basis. Some operators still charged according to silo diameter and height. Yields are difficult to determine when charging by the ton, especially with larger or horizontal silos. There were insufficient replies from operators charging by ton, by diameter and by the acre to report rates for any area.

Custom operators prefer to charge by the hour because it is fairer to all concerned. They can go faster with a light crop and therefore charge less than a standard per-acre rate. If they have to travel a long distance from field to silo, the cost will be higher to the grower. It is also much easier to establish a total cost, especially when a bunker silo has been filled.

Rates for filling varied, depending on the combinations of number of men, number and size of tractors, size and type of harvester, number and type of forage wagons, and blower with or without a recutter attachment. In this survey, it was found that two groups of silo filling equipment were common to all areas of Ontario. One group consisted to two tractors, two-row harvester, blower, wagons, and two men. The other group consisted of one to three tractors, self-propelled harvester, blower wagons, and one to three men. Depending on circumstances encountered, there were some variations within each grouping. For example, the number of men supplied to power the equipment varied according to conditions and area. Therefore, for each group in each area, a wide range in charges per hour occurred. Tractors with higher horsepower, for example, are able to move more tonnage into the silo per hour than tractors with lower horsepower.

The custom silo filler may make some adjustments in his charges by allowing a rate per hour for each additional man supplied as well as for each tractor supplied in addition to his usual silo filling equipment.

CUSTOM HAY HARVESTING

In all areas, swathing consisted of cutting and conditioning hay in one operation. Custom rates for conventional baling included the twine and varied within each survey area depending on the extra equipment supplied. Some custom operators charged more per bale with a bale stooker or wagon pulled behind the baler. The custom baling of large round bales occurred in all survey areas except for Southern Ontario, Area 2.

The custom silo filling of haylage, unless some unusual conditions occur, would be the same as for custom silo filling of corn in most areas.

AERIAL OPERATIONS

This is the fourth year that custom rates for aerial applications and spraying were collected. Because of the numbers, no attempt was made to provide information on rates charged for any one area of Ontario. With only one or two responses, certain aerial operations were not published.

Depending on conditions encountered and distances travelled from a suitable landing strip to area of work, additional charges may occur. If any doubt occurs, a careful check should be made between the farmer and the aerial applicator over rates and additional charges, if any. Some custom aerial applicators charge on a per pound or per load basis. The rates in this report are representative of these charges on a per acre and per pound basis where enough responses were received.

Table 1. - Rates for Custom Tillage, Planting, Weed Control, and Fertilizer Applications, Area 1, Southern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars per acre		
TILLAGE				
Plowing:				
Moldboard	38	14.93	15.00	10.00- 20.00
Discing	22	7.15	6.00	5.00- 12.00
Cultivating	17	6.34	6.00	5.00- 8.00
Soil saver	8	12.54	12.00	10.00- 19.35
PLANTING				
Corn & Soybeans[a]	35	9.10	10.00	6.00- 12.00
Small Grains	9	7.69	---	5.00- 10.00
WEED CONTROL[b]				
Spraying	12	6.21	6.00	5.00- 10.00
Incorporating[c]	15	8.95	8.00	7.00- 12.00
Row cultivating	11	5.95	5.00	5.00- 10.00
Rotary hoeing	5	4.90	5.00	3.00- 6.00
FERTILIZING				
Anhydrous	5	7.30	8.00	6.00- 8.00

[a] Those planting soybeans only: Number reporting 19, Average $8.54 per acre, Most frequent $10.00, Range $5.00-12.00.

[b] Spraying and incorporating does not include any materials.

[c] Incorporating included the application of the spray material and working the material into the ground.

Table 2. - Rates for Custom Harvesting Operations, Area 1, Southern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
HARVESTING CORN				
Picking: per acre				
Commercial corn.....	3	30.00	---	25.00- 35.00
Seed corn[b]	8	39.81	40.00	37.50- 42.00
Combining per acre.....	69	30.03	30.00	25.00- 35.00
Trucking, per bushel.....	25	.14	.15	.08- .20
Trucking, per tonne.....	10	5.35	5.00	4.00- 7.50
HARVESTING SMALL GRAINS AND SOYBEANS, PER ACRE				
Small grains:				
Swathing.....	3	8.00	---	7.00- 9.00
Combining wheat.....	27	25.22	25.00	22.00- 30.00
Combining other small grains.....	38	25.42	25.00	20.00- 32.00
Combining soybeans.....	71	26.99	28.00	22.00- 32.00
FORAGE OPERATIONS				
Hay:				
Swathing, per acre.....	11	10.91	10.00	7.00- 18.00
Baling, per bale:				
Small rectangular.....	12	.31	.35	.25- .35
Large round.....	4	5.81	---	5.00- 7.00
Silo filling, per hour:[a]				
Group 1.....	6	97.50	100.00	85.00-125.00
Group 2.....	9	122.22	---	100.00-200.00
SNOW REMOVAL				
Per hour.....	5	45.00	---	30.00- 75.00

[a]The following combinations were used:

Group 1: 1 or 2 tractors, 2-row harvester, blower, wagons, and 2 men
Group 2: 1 or 2 tractors, SP 2- to 4-row harvester, blower, wagons, and 2 men

[b]Most operators supply a dump wagon with the picker

NOTE: Adjustments can be made in silo filling operations by allowing a rate per hour for each additional man and tractor supplied.

Table 3. - Rates for Custom Tillage, Planting, Weed Control, and Fertilizer Applications, Area 2, Southern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
TILLAGE[a]				
Plowing:				
Per acre	50	14.41	15.00	10.00- 20.00
Per hour	5	51.00	55.00	30.00- 75.00
Discing:				
Per acre	28	8.31	8.00	6.00- 10.00
Cultivating:				
Per acre	21	7.64	8.00	4.00- 10.00
Soil saver, per acre	13	13.92	14.00	11.00- 18.00
PLANTING, PER ACRE:				
Corn & Soybeans[b]	43	9.82	10.00	7.00- 13.00
Small grains	23	8.78	8.00	6.00- 12.00
WEED CONTROL[c], PER ACRE:				
Spraying	36	5.56	6.00	4.00- 8.00
Incorporating[d]	9	11.83	12.00	9.50- 13.00.
FERTILIZING, PER ACRE:				
Anhydrous	3	7.67	8.00	7.00- 8.00

[a] Per hour rates for the tillage operations of plowing, discing and cultivating differ according to the size of tractor and equipment used to perform the operation.

[b] Those planting soybeans only: Number reporting 6, Average $9.33 per acre, Most frequent --, Range $7.50-12.00.

[c] Spraying and incorporating does not include any materials.

[d] Incorporating included the application of the spray material and working the material into the ground.

Table 4. - Rates for Custom Harvesting Operations, Area 2, Southern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
HARVESTING CORN				
Combining:				
Per acre	64	30.99	30.00	25.00- 40.00
Per hour	10	92.00	95.00	50.00-120.00
Trucking:				
Per bushel	8	.15	.14	.12- .17
Per tonne	20	5.85	6.00	4.00- 7.00
HARVESTING SMALL GRAINS AND SOYBEANS				
Combining:				
Wheat, per acre	14	22.21	25.00	20.00- 25.00
Other Small grains,				
per acre	49	22.85	25.00	19.00- 30.00
per hour	9	88.33	100.00	60.00-100.00
Soybeans, per acre	41	30.72	30.00	25.00- 35.00
FORAGE OPERATIONS				
Hay:				
Swathing, per acre	7	12.29	10.00	10.00- 15.00
Swathing, per hour	5	34.40	30.00	30.00- 42.00
Baling, per bale	13	.36	.35	.30- .45
Silo filling, per hour:[a]				
Group 1	18	92.50	100.00	55.00-125.00
Group 2	9	149.44	---	120.00-200.00
SNOW REMOVAL				
Per hour	6	46.67	---	30.00- 60.00

[a] The following combinations were used:

Group 1: 2 tractors, 2-row harvester, blower, wagons, and 2 men
Group 2: 1 to 3 tractors, SP 2- or 3-row harvester, blower, wagons, and 1 to 3 men

NOTE: Adjustments can be made in silo filling operations by allowing a rate per hour for each additional man and tractor supplied.

Table 5. - Rates for Custom Tillage, Planting, Weed Control, Fertilizer Applications, Area 3, Western Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
TILLAGE[a]				
Plowing, moldboard:				
Per acre	83	13.65	14.00	10.00- 21.00
Per hour	6	46.83	---	25.00- 70.00
Discing:				
Per acre	27	7.61	8.00	6.00- 11.00
Cultivating:				
Per acre	49	6.29	6.00	4.00- 10.00
Per hour	5	54.60	---	25.00- 80.00
Soil saver, per acre	4	12.62	---	10.00- 17.50
PLANTING, PER ACRE				
Corn & soybeans[b]	76	9.32	10.00	7.00- 13.00
Small grains	45	7.94	8.00	6.00- 11.00
WEED CONTROL[c], **PER ACRE**				
Spraying	61	5.00	5.00	3.00- 10.00
Incorporating[d]	12	10.20	---	8.00- 12.00
Row cultivating	7	5.18	5.00	4.00- 6.50
MANURE HANDLING, PER HOUR				
Loading & spreading solid manure[e]	5	50.80	---	30.00- 70.00

[a] Per hour rates for tillage operations of plowing, discing and cultivating differ according to the size of tractor and equipment used to perform the operations.

[b] Those planting soybeans only: Number reporting 18, Average $8.94 per acre, Most frequent $9.00, Range $7,00-12.00.

[c] Spraying and incorporating does not include any materials.

[d] Incorporating included the application of the spray material and working the material into the ground.

[e] Loading and spreading of solid manure includes 1-2 tractors, loader, spreader, and 1 man.

Table 6. - Rates for Custom Harvesting Operations, Area 3, Western Ontario 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
HARVESTING CORN				
Combining:				
Per acre	98	30.60	30.00	25.00- 40.00
Per hour	15	114.60	110.00	89.00-150.00
Trucking, per tonne	33	5.68	5.00	3.50- 10.00
HARVESTING SMALL GRAINS AND SOYBEANS				
Swathing grains				
Per acre	36	9.01	9.00	7.00- 14.00
Combining grains:				
Per acre	93	23.62	22.00	19.00- 30.00
Per hour	18	104.17	110.00	85.00-125.00
Combining soybeans:				
Per acre	52	28.40	30.00	25.00- 32.00
Harvest canola, per acre				
Swathing	9	10.31	10.00	9.00- 12.00
Combining	7	25.14	25.00	24.00- 30.00
HARVESTING WHITE BEANS, PER ACRE				
Pulling & windrowing	8	14.09	---	10.70- 18.00
Combining	10	28.20	30.00	24.00- 35.00
FORAGE OPERATIONS				
Swathing hay:				
Per acre	37	10.32	10.00	7.00- 14.00
Per hour	5	41.80	---	25.00- 60.00
Baling hay, per bale:				
Small rectangular	28	.35	.35	.20- .45
Large round	20	6.15	6.00	4.00- 8.00
Silo filling, per hour:[a]				
Group 1	22	85.77	---	50.00-110.00
Group 2	11	144.55	---	110.00-210.00
SNOW REMOVAL				
Per hour	23	45.93	---	30.00- 80.00

[a] The following combinations were used:

Group 1: 1 or 2 tractors, 2-row harvester, wagons, blower, and 2 men
Group 2: 1 to 3 tractors, SP 2- or 3-row harvester, blower, wagons, and 1 to 3 men

NOTE: Adjustments can be made in silo filling operations by allowing a rate per hour for each additional man and tractor supplied.

Table 7. - Rates for Custom Tillage, Planting, Weed Control, Fertilizer Applications, Area 4, Central Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
TILLAGE[a]				
Plowing:				
Per acre	32	14.78	15.00	11.00- 18.00
Per hour	13	42.30	---	20.00- 70.00
Discing:				
Per acre	17	7.76	---	5.00- 10.00
Cultivating:				
Per acre	25	7.17	6.00	5.00- 10.00
Per hour	9	53.00	---	30.00- 84.00
PLANTING, PER ACRE				
Corn	32	9.21	---	7.00- 12.00
Soybeans	9	8.61	---	6.50- 10.00
Small grains	28	8.36	10.00	5.00- 10.00
WEED CONTROL, PER ACRE[b]				
Spraying	21	5.36	5.00	4.00- 7.00
Incorporating[c]	5	9.60	10.00	6.50- 11.00

[a] Per hour rates for the tillage operations of plowing, discing, and cultivating differ according to the size of tractor and equipment used to perform the operations.

[b] Spraying and incorporating does not include any materials.

[c] Incorporating included the application of the spray material and working the material into the ground.

Table 8. - Rates for Custom Harvesting Operations, Area 4, Central Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
HARVESTING CORN				
Combining				
Per acre	36	31.28	30.00	27.50- 36.00
Per hour	8	109.38	---	70.00-240.00
Trucking, per tonne	17	6.38	---	4.00- 9.00
HARVESTING SMALL GRAINS				
Combining grains:				
Per acre	36	24.88	25.00	22.00- 28.00
Per hour	18	79.03	---	30.00-140.00
Combining soybeans:				
Per acre	18	30.33	30.00	29.00- 35.00
Combining Canola:				
Per acre	5	26.80	25.00	25.00- 30.00
FORAGE OPERATIONS				
Swathing hay:				
Per acre	18	11.05	12.00	8.00- 14.00
Per hour	4	36.25	35.00	30.00- 45.00
Baling hay, per bale:				
Small rectangular	15	.35	.35	.30- .50
Large round	23	6.18	6.00	4.50- 8.00
Silo filling, per hour:[a]				
Group 1	22	78.18	---	50.00-125.00
Group 2	8	127.50	---	95.00-150.00
SNOW REMOVAL				
Per hour	9	36.00	35.00	18.00- 55.00

[a] The following combinations were used:

Group 1: 1 or 2 tractors, 2-row harvester, wagons, blower, and 1 or 2 men

Group 2: 1 or 2 tractors, SP 2- or 3-row harvester, wagons, blower, and 1 or 2 men

NOTE: Adjustments can be made in silo filling operations by allowing a rate per hour for each additional man and tractor supplied.

Table 9. - Rates for Custom Tillage, Planting, Weed Control, Fertilizer Applications, Area 5, Eastern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
TILLAGE[a]				
Plowing:				
Per acre	25	16.06	15.00	12.00- 24.00
Per hour	18	53.61	50.00	25.00-110.00
Discing:				
Per acre	11	9.34	10.00	7.50- 14.75
Per hour	11	50.45	50.00	30.00- 80.00
Cultivating:				
Per acre	7	7.93	8.00	7.50- 8.00
Per hour	9	53.89	50.00	30.00- 80.00
PLANTING				
Corn:				
Per acre	20	9.62	10.00	5.00- 13.00
Per hour	6	35.33	---	24.00- 55.00
Small grains:				
Per acre	9	7.56	---	5.00- 10.00
Per hour	4	31.25	25.00	25.00- 50.00
WEED CONTROL[b]				
Spraying:				
Per acre	19	5.59	5.00	4.00- 6.00
Per hour	4	30.00	---	20.00- 45.00
FERTILIZING, PER ACRE				
Anhydrous	3	8.17	---	7.50- 8.50

[a]Per hour rates for the tillage operations of plowing, discing, and cultivating differ according to the size of tractor and equipment used to perform the operations.

[b]Spraying does not include any materials.

Table 10. - Rates for Custom Harvesting Operations, Area 5, Eastern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
HARVESTING CORN				
Picking, per hour.....	5	51.00	---	40.00- 65.00
Combining:				
Per acre.....	8	31.38	---	28.00- 35.00
Per hour.....	28	98.93	100.00	75.00-125.00
Trucking, per tonne.....	5	6.10	6.00	4.50- 8.00
HARVESTING SMALL GRAINS AND SOYBEANS				
Combining small grains:				
Per acre.....	16	24.62	25.00	20.00- 30.00
Per hour.....	38	75.92	85.00	30.00-120.00
Combining Soybeans:				
Per acre.....	3	27.67	---	23.00- 30.00
Per hour.....	4	105.00	---	90.00-130.00
FORAGE OPERATIONS				
Swathing:				
Per acre.....	7	9.43	---	7.00- 12.00
Per hour.....	10	34.80	---	22.00- 55.00
Baling hay, per bale:				
Small rectangular.....	10	.37	.40	.30- .40
Large round bales.....	22	6.18	7.00	4.00- 9.00
Silo filling, per hour:[a]				
Group 1.....	18	83.89	100.00	40.00-110.00
Group 2.....	8	121.25	120.00	105.00-150.00
SNOW REMOVAL				
Per hour.....	13	43.54	40.00	25.00- 60.00

[a]The following combinations were used:

Group 1: 1 or 2 tractors, 2-row harvester, wagons, blower, and 1 or 2 men

Group 2: 1 or 2 tractors, SP 2- or 3-row harvester, blower, wagons, and 1 or 2 men

NOTE: Adjustments can be made in silo filling operations by allowing a rate per hour for each additional man and tractor supplied.

Table 11. - Rates for Custom Farmwork Operations, Area 6, Northern Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
TILLAGE[a]				
Plowing:				
Per acre	3	13.33	---	12.00- 15.00
Per hour	3	33.33	---	25.00- 50.00
Chisel Plowing:				
Per hour	3	50.00	---	40.00- 65.00
Discing:				
Per hour	5	37.60	---	25.00- 50.00
Cultivating:				
Per hour	4	42.50	50.00	25.00- 50.00
WEED CONTROL				
Spraying, per acre[b]	3	5.17	---	4.50- 6.50
HARVESTING SMALL GRAINS[a]				
Swathing:				
Per hour	3	35.00	---	25.00- 45.00
Combining:				
Per hour	20	60.52	65.00	25.00-100.00
FORAGE OPERATIONS				
Swathing hay, per hour	7	29.71	---	20.00- 40.00
Baling, large round bales, per bale	13	4.77	5.00	3.00- 6.00

[a]Per hour rates for the tillage operations of plowing and discing and for harvesting operations differ according to the size of tractor and equipment, and size of combine used.

[b]Spraying does not include any materials.

Table 12. - Rates for Custom Farmwork Operations, Aerial Spraying, Ontario, 1986

Operation	Number Reporting	Average	Most Frequent	Range
		dollars		
APPLICATION[a]				
Seeding:				
Per pound.....	7	.083	.080	.078- .090
Fertilizer:				
Per pound.....	7	.076	.070	.070- .090
SPRAYING, PER ACRE[a]				
Herbicides.....	9	6.63	6.75	3.48-11.00
Insecticides.....	6	6.92	--	5.00-12.00
Fungicides.....	4	8.12	--	5.00-12.00

[a] Aerial applications and spraying do not include any materials.

NOTE: Spraying rates will vary according to quantities of water applied per acre.

APPENDIX

Appendix Table 1. - Rates of Accomplishing Farm Operations in Ontario, 1986

Operation	Number Reporting	Acres per Hour		
		Average	Most Frequent	Range
TILLAGE				
Plowing:				
60- 85 HP	10	2.3	2	1 1/2 - 2 1/2
86-115 HP	13	3.4	3	2 1/2 - 4
116-135 HP	9	3.9	4	3 - 5
136-160 HP	13	4.6	5	3 - 6
161-200 HP	3	6.8	6 1/2	6 1/2 - 7 1/2
Discing:				
60- 85 HP	6	5.3	5	3 1/2 - 8
86-115 HP	5	9.5	10	7 1/2 -11
136-160 HP	6	10.0	11	7 -14
Incorpating, 80-100 HP	5	6.7	7	4 - 9
PLANTING				
Corn:				
4-row	49	3.9	4	2 1/2 - 5
6-row	8	6.7	6	4 1/2 - 9
8-row	6	7.6	8	5 1/2 - 9
Small grains,				
15- to 17-run	5	4.2	4 1/2	3 - 5
SUMMER OPERATIONS				
Spraying:				
Tractor & sprayer	28	7.8	7	5 -12
SP sprayer	8	16.9	20	10 -25
Row cultivate	3	8.3	8	7 -10
Anhydrous application:				
100 HP	4	5.0	5	4
150 HP	3	8.7	8	8 -10
HARVESTING SMALL GRAINS				
Swathing:				
10 ft	9	3.0	3	2 - 4
12 ft	5	3.6	3 1/2	3 - 5
Combining:				
10 ft	10	2.7	2 1/2	2 - 3
11 ft	4	2.8	2 1/2	2 - 4
12 ft	6	3.6	4	2 - 5
13 ft	21	4.0	4	2 1/2 - 9
14 ft	11	5.1	4 1/2	3 -10
15 ft. to 18 ft	8	5.6	6	3 -10

(Appendix Table 1 is concluded on the next page.)

Appendix Table 1 - concluded

Operation	Number Reporting	Acres per Hour		
		Average	Most Frequent	Range
HARVESTING CORN & BEANS				
Combine corn:				
2-row	4	2.0	1 1/2	1 1/2 - 3
4-row	44	3.2	3 1/2	2 1/2 - 5
6-row	11	4.3	4	3 - 7
Corn picking:				
1-row	3	1.0	1	1 - 1 1/4
2-row	6	1.7	2	1 - 2
3-row	2	3.0	3	3
Combine soybeans:				
13 ft. & under	11	3.6	4	3 - 4
14 ft. & over	5	4.6	5	3 - 6
Drying, batch dried:				
Bushels per hour	3	115.0	115	100 -125
HARVESTING FORAGES				
Swathing hay:				
Swather, 10 ft	9	3.1	3	2 - 4
Swather, 12 ft	5	3.6	4	3 - 5
Haybine, 9 ft	4	2.8	3	2 - 4
Silo filling:[a]				
Group 1	3	1.5	1 1/2	1 - 2
Group 2	19	2.1	2	1 1/2 - 4
Group 3	7	2.2	2	1 1/2 - 3
Group 4	4	3.1	3	2 - 4
Group 5	3	4.2	4	4 - 4 1/2
Baling, dropped on ground:				
Bales per hour (small rectangular)	3	250.0	250	225 - 275

NOTE: Information based on survey conducted in Ontario in 1974.

[a] The width of the cutting bar was used to rate the combines, although it is realized that the size of the cleaning and the separation area are also important in rating the capacity of combines.
The following combinations were used:
Group 1: tractor drawn, 1-row harvester with wagons.
Group 2: tractor drawn, 2-row harvester with wagons.
Group 3: self-propelled, 2-row harvester with wagons.
Group 4: self-propelled, 3-row harvester with wagons.
Group 5: self-propelled or tractor drawn harvesters with trucks.

Appendix Table 2. - Corn Conversion Table - Wet Kilograms to Dry Tonnes Using Natural Gas, 1986

Moisture	Wet Corn (Divisor)	Drying Charge[a]	Moisture	Wet Corn (Divisor)	Drying Charge[a]	Moisture	Wet Corn (Divisor)	Drying Charge[a]
%	kg	$	%	kg	$	%	kg	$
15.5	1000.0	---						
15.6	1011.3	3.92	19.6	1061.6	8.40	23.6	1117.2	10.65
15.7	1012.5	4.11	19.7	1062.9	8.45	23.7	1118.7	10.70
15.8	1013.7	4.30	19.8	1064.3	8.50	23.8	1120.1	10.75
15.9	1014.9	4.49	19.9	1065.6	8.55	23.9	1121.6	10.80
16.0	1016.1	4.68	20.0	1066.9	8.78	24.0	1123.1	10.85
16.1	1017.3	4.87	20.1	1068.3	8.85	24.1	1124.6	10.90
16.2	1018.5	5.06	20.2	1069.6	8.92	24.2	1126.0	10.94
16.3	1019.8	5.25	20.3	1070.9	8.98	24.3	1127.5	10.98
16.4	1021.0	5.43	20.4	1072.3	9.04	24.4	1129.0	11.02
16.5	1022.2	5.61	20.5	1073.6	9.10	24.5	1130.5	11.06
16.6	1023.4	5.79	20.6	1075.0	9.15	24.6	1132.0	11.11
16.7	1024.7	5.97	20.7	1076.3	9.20	24.7	1133.5	11.16
16.8	1025.9	6.15	20.8	1077.7	9.25	24.8	1135.0	11.21
16.9	1027.1	6.34	20.9	1079.1	9.30	24.9	1136.5	11.26
17.0	1028.4	6.53	21.0	1080.4	9.35	25.0	1138.0	11.31
17.1	1029.6	6.72	21.1	1081.8	9.40	25.1	1139.6	11.37
17.2	1030.8	6.91	21.2	1083.2	9.46	25.2	1141.1	11.43
17.3	1032.1	7.10	21.3	1084.5	9.50	25.3	1142.6	11.48
17.4	1033.3	7.19	21.4	1085.9	9.54	25.4	1144.1	11.53
17.5	1034.6	7.28	21.5	1087.3	9.58	25.5	1145.7	11.58
17.6	1035.8	7.37	21.6	1088.7	9.63	25.6	1147.2	11.63
17.7	1037.1	7.46	21.7	1090.1	9.68	25.7	1148.8	11.68
17.8	1038.4	7.55	21.8	1091.5	9.73	25.8	1150.3	11.71
17.9	1039.6	7.59	21.9	1092.9	9.78	25.9	1151.9	11.75
18.0	1040.9	7.63	22.0	1094.3	9.82	26.0	1153.4	11.80
18.1	1042.2	7.67	22.1	1095.7	9.86	26.1	1155.0	11.85
18.2	1043.4	7.71	22.2	1097.1	9.91	26.2	1156.6	11.90
18.3	1044.7	7.75	22.3	1098.5	9.96	26.3	1158.1	11.95
18.4	1046.0	7.80	22.4	1099.9	10.01	26.4	1159.7	12.00
18.5	1047.3	7.85	22.5	1101.3	10.06	26.5	1161.3	12.05
18.6	1048.6	7.90	22.6	1102.8	10.11	26.6	1162.9	12.10
18.7	1049.9	7.95	22.7	1104.2	10.16	26.7	1164.4	12.15
18.8	1051.2	8.00	22.8	1105.6	10.22	26.8	1166.0	12.20
18.9	1052.4	8.05	22.9	1107.0	10.28	26.9	1167.6	12.25
19.0	1053.7	8.10	23.0	1108.5	10.33	27.0	1169.2	12.31
19.1	1055.0	8.15	23.1	1109.9	10.38	27.1	1170.8	12.37
19.2	1056.4	8.20	23.2	1111.4	10.43	27.2	1172.4	12.43
19.3	1057.7	8.25	23.3	1112.8	10.48	27.3	1174.1	12.48
19.4	1059.0	8.30	23.4	1114.3	10.53	27.4	1175.7	12.53
19.5	1060.3	8.35	23.5	1115.7	10.59	27.5	1177.3	12.58

Wet kilograms to dry tonnes chart showing number of kilograms of wet corn at varying degrees of moisture that are required to yield a dry tonne including allowance of 1 percent invisible loss. Charges for drying assessed per tonne of dry corn.

(Appendix Table 2 is concluded on the next page)

Appendix Table 2. - Corn Conversion Table - Wet Kilograms to Dry Tonnes Using Natural Gas, 1986 (continued)

Moisture	Wet Corn (Divisor)	Drying Charge[a]	Moisture	Wet Corn (Divisor)	Drying Charge[a]	Moisture	Wet Corn (Divisor)	Drying Charge[a]
%	kg	$	%	kg	$	%	kg	$
27.6	1178.9	12.63	32.1	1257.0	14.76	36.6	1346.3	19.12
27.7	1180.5	12.66	32.2	1258.9	14.82	36.7	1348.4	19.29
27.8	1182.2	12.70	32.3	1260.8	14.87	36.8	1350.5	19.47
27.9	1183.8	12.74	32.4	1262.6	14.93	36.9	1352.7	19.65
28.0	1185.5	12.78	32.5	1264.5	14.98	37.0	1354.8	19.82
28.1	1187.1	12.82	32.6	1266.4	15.03	37.1	1357.0	19.99
28.2	1188.8	12.87	32.7	1268.3	15.08	37.2	1359.1	20.16
28.3	1190.4	12.91	32.8	1270.1	15.13	37.3	1361.3	20.33
28.4	1192.1	12.95	32.9	1272.0	15.18	37.4	1363.5	20.49
28.5	1193.8	13.01	33.0	1273.9	15.23	37.5	1365.7	20.67
28.6	1195.4	13.07	33.1	1275.8	15.28	37.6	1367.8	20.85
28.7	1197.1	13.12	33.2	1277.7	15.33	37.7	1370.0	21.03
28.8	1198.8	13.17	33.3	1279.7	15.39	37.8	1372.2	21.21
28.9	1200.5	13.23	33.4	1281.6	15.44	37.9	1374.5	21.39
29.0	1202.2	13.29	33.5	1283.5	15.49	38.0	1376.7	21.57
29.1	1203.9	13.34	33.6	1285.4	15.53	38.1	1378.9	21.74
29.2	1205.6	13.40	33.7	1287.4	15.59	38.2	1381.1	21.91
29.3	1207.3	13.46	33.8	1289.3	15.65	38.3	1383.4	22.07
29.4	1209.0	13.52	33.9	1291.3	15.70	38.4	1385.6	22.23
29.5	1210.7	13.58	34.0	1293.2	15.75	38.5	1387.9	22.39
29.6	1212.4	13.62	34.1	1295.2	15.80	38.6	1390.1	22.57
29.7	1214.1	13.66	34.2	1297.2	15.85	38.7	1392.4	22.75
29.8	1215.9	13.70	34.3	1299.1	15.90	38.8	1394.7	22.93
29.9	1217.6	13.74	34.4	1301.1	15.96	38.9	1396.9	23.11
30.0	1219.3	13.80	34.5	1303.1	16.05	39.0	1399.2	23.28
30.1	1221.1	13.87	34.6	1305.1	16.15	39.1	1401.5	23.45
30.2	1222.8	13.94	34.7	1307.1	16.25	39.2	1403.8	23.62
30.3	1224.6	13.98	34.8	1309.1	16.34	39.3	1406.2	23.80
30.4	1226.3	14.02	34.9	1311.1	16.51	39.4	1408.5	24.02
30.5	1228.1	14.06	35.0	1313.1	16.68	39.5	1410.8	24.24
30.6	1229.9	14.11	35.1	1315.2	16.84	39.6	1413.1	24.34
30.7	1231.7	14.15	35.2	1317.2	17.01	39.7	1415.5	24.45
30.8	1233.4	14.20	35.3	1319.2	17.18	39.8	1417.8	24.65
30.9	1235.2	14.25	35.4	1321.3	17.35	39.9	1420.2	24.88
31.0	1237.0	14.30	35.5	1323.3	17.53	40.0	1422.6	25.10
31.1	1238.8	14.33	35.6	1325.4	17.67	40.1	1424.9	25.32
31.2	1240.6	14.36	35.7	1327.4	17.81	40.2	1427.3	25.54
31.3	1242.4	14.39	35.8	1329.5	17.94	40.3	1429.7	25.76
31.4	1244.2	14.42	35.9	1331.6	18.07	40.4	1432.1	25.98
31.5	1246.0	14.45	36.0	1333.6	18.20	40.5	1434.5	26.20
31.6	1247.9	14.48	36.1	1335.7	18.33	40.6	1436.9	26.42
31.7	1249.7	14.51	36.2	1337.8	18.46	40.7	1439.3	26.64
31.8	1251.5	14.55	36.3	1339.9	18.58	40.8	1441.8	26.86
31.9	1253.4	14.62	36.4	1342.0	18.76	40.9	1444.2	27.08
32.0	1255.2	14.69	36.5	1344.1	18.94	41.0	1446.7	27.30

[a]Suggested charges based on average labour, overhead and fuel costs for commercial natural gas dryers, effective September 1, 1986.

Source: Ontario Grain and Feed Dealers Association

Appendix Table 3. - Soybean Conversion Table - Wet Kilograms to Dry Tonnes, 1986 Using Natural Gas

Moisture	Soybeans (Divisor)	Drying Charge[a]	Moisture	Soybeans (Divisor)	Drying Charge[a]	Moisture	Soybeans (Divisor)	Drying Charge[a]
%	kg	$	%	kg	$	%	kg	$
13.0	988.5							
13.1	989.6		17.1	1042.6	8.52	21.1	1095.4	15.86
13.2	990.8		17.2	1043.8	8.71	21.2	1096.8	16.03
13.3	991.9		17.3	1045.1	8.90	21.3	1098.2	16.20
13.4	993.1		17.4	1046.4	9.06	21.4	1099.6	16.35
13.5	994.2		17.5	1047.6	9.22	21.5	1101.0	16.50
13.6	995.4		17.6	1048.9	9.38	21.6	1102.4	16.65
13.7	996.5		17.7	1050.2	9.54	21.7	1103.8	16.80
13.8	997.7		17.8	1051.5	9.70	21.8	1105.2	16.95
13.9	998.8		17.9	1052.7	9.90	21.9	1106.7	17.15
14.0	1000.0		18.0	1054.0	10.10	22.0	1108.1	17.35
14.1	1006.2	2.90	18.1	1055.3	10.30	22.1	1109.5	17.55
14.2	1007.3	3.10	18.2	1056.6	10.50	22.2	1110.9	17.75
14.3	1008.5	3.30	18.3	1057.9	10.70	22.3	1112.4	17.95
14.4	1009.7	3.50	18.4	1059.2	10.87	22.4	1113.8	18.13
14.5	1010.9	3.70	18.5	1060.5	11.04	22.5	1115.2	18.31
14.6	1012.1	3.90	18.6	1061.8	11.21	22.6	1116.7	18.49
14.7	1013.2	4.10	18.7	1063.1	11.38	22.7	1118.1	18.67
14.8	1014.4	4.30	18.8	1064.4	11.55	22.8	1119.6	18.85
14.9	1015.6	4.50	18.9	1065.7	11.75	22.9	1121.0	19.07
15.0	1016.8	4.70	19.0	1067.0	11.95	23.0	1122.5	19.29
15.1	1018.0	4.90	19.1	1068.4	12.15	23.1	1123.9	19.51
15.2	1019.2	5.10	19.2	1069.7	12.35	23.2	1125.4	19.73
15.3	1020.4	5.30	19.3	1071.0	12.55	23.3	1126.9	19.95
15.4	1021.6	5.48	19.4	1072.3	12.73	23.4	1128.3	20.11
15.5	1022.8	5.66	19.5	1073.7	12.91	23.5	1129.8	20.27
15.6	1024.1	5.84	19.6	1075.0	13.09	23.6	1131.3	20.43
15.7	1025.3	6.02	19.7	1076.3	13.27	23.7	1132.8	20.59
15.8	1026.5	6.20	19.8	1077.7	13.45	23.8	1134.3	20.75
15.9	1027.7	6.36	19.9	1079.0	13.63	23.9	1135.7	20.93
16.0	1028.9	6.52	20.0	1080.4	13.81	24.0	1137.2	21.11
16.1	1030.2	6.68	20.1	1081.7	13.99	24.1	1138.7	21.29
16.2	1031.4	6.84	20.2	1083.1	14.17	24.2	1140.2	21.47
16.3	1032.6	7.00	20.3	1084.4	14.35	24.3	1141.7	21.65
16.4	1033.9	7.19	20.4	1085.8	14.55	24.4	1143.3	21.85
16.5	1035.1	7.38	20.5	1087.2	14.75	24.5	1144.8	22.05
16.6	1036.3	7.57	20.6	1088.5	14.95	24.6	1146.3	22.25
16.7	1037.6	7.76	20.7	1089.9	15.15	24.7	1147.8	22.45
16.8	1038.8	7.95	20.8	1091.3	15.35	24.8	1149.3	22.65
16.9	1040.1	8.14	20.9	1092.7	15.52	24.9	1150.9	22.83
17.0	1041.3	8.33	21.0	1094.1	15.69	25.0	1152.4	23.01

[a]Drying charges are negotiated between the Ontario Grain and Feed Dealers Association and the Soybean Growers' Marketing Board. Rates listed were effective from September 1, 1986.

Note: This chart shows the number of kilograms of soybeans at varying degrees of moisture that are required to yield a dry tonne at 14 percent moisture, including allowance of 1 percent invisible loss during drying. Charges for drying are assessed per tonne of dry soybeans.

Source: Ontario Grain and Feed Dealers Association.

NEGOTIATED DEALER HANDLING ALLOWANCE ON SOYABEANS

BASIS 1982 MARKETING AGREEMENT

$/tonne	$/tonne
000.00 - 150.00	7.90
150.01 - 200.00	8.50
200.01 - 250.00	9.30
250.01 - 300.00	9.90
300.01 - 350.00	10.80
350.01 - 400.00	11.60
400.01 - 450.00	12.20
450.01 - 500.00	12.80

For each $50.00 over $500.00 per tonne, add $.55 per tonne.

Rates effective September 1, 1986

Source: Ontario Grain and Feed Dealers Association

GRAIN HANDLING AND STORAGE TARIFF

Suggested Rates Effective August 1st, 1986

Storage Schedule

Corn	Cents Per Day Per Tonne	3.8
Soya-Beans	Cents Per Day Per Tonne	3.5
Wheat	Cents Per Day Per Tonne	3.5
Rye	Cents Per Day Per Tonne	3.7
Barley	Cents Per Day Per Tonne	4.3
Oats	Cents Per Day Per Tonne	5.7

Elevation Charges

In-Elevation Charge	Per Tonne	$1.25
Custom Handling Charge	Per Tonne	$10.00

Grade Discounts

CORN

Grades #1 & #2	Nil
Grade #3	$ .80/Tonne
Grade #4	$ 3.90/Tonne
Grade #5	$ 7.90/Tonne

SOYA-BEAN

Grades #1 & #2	Nil
Grade #3	$ 2.00/Tonne
Grade #4	$ 5.00/Tonne
Grade #5	$10.00/Tonne

Rules to Apply

1. Charges for Drying, Prepaid Trucking, In-Elevation Charge and Accrued Storage are Due and Payable as of the 31st day of December of each year.

2. Storage Charges to be Computed on Dry Weight Basis.

SOURCE: Ontario Grain & Feed Dealers Association.

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ISSN-0713-0449
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87-02-09 3.5M